

TWO NEW SPECIES OF *TRIPOGON* (POACEAE) FROM INDIA

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ABSTRACT

Two new species of Poaceae, *Tripogon sivarajanii* Sunil and *T. vellarianus* Pradeep from the Western Ghats of Kerala, India are described and illustrated.

RESUMEN

Se describen e ilustran dos nuevas especies de Poaceae, *Tripogon sivarajanii* Sunil y *T. vellarianus* Pradeep de los Western Ghats de Kerala, India.

The genus *Tripogon* Roem. & Schult., with about 31 species, is distributed in the Old World tropics (Mabberley 1997). In India, the genus has ca. 12 species most of them occurring at an elevation above 900 m. Four species, *T. bromoides* Roem. & Schult., *T. narayanii* Sreekumar *et al.*, *T. ananthaswamianus* Sreekumar *et al.* and *T. capitellatus* Jaub. & Spach. are known from Kerala (Sreekumar & Nair 1991). During the course of floristic investigation on the Western Ghats of Kerala, the authors came across two interesting specimens of *Tripogon* which do not correspond to any of the previously described taxa. We conclude that they represent two new species and we describe them here.

***Tripogon sivarajanii* Sunil, sp. nov. (Fig. 1).** TYPE: INDIA. KERALA. Idukki Dt.: Valakettimala near Moolamattam, 1020 m, 2 Sep 1997, C.N. Sunil 2117 (HOLOTYPE: MH; ISOTYPES: BRIT, K, L, PBL).

Tripogon trifido affinis, *T. sivarajanii* ligulis glabris, lemmatis aristis 3–3.5 mm longis, palea apicaliter 2-lobata facile distinguendus.

Tufted perennial herb. Culms 40–70 cm high; nodes glabrous. Leaves with the blades 15–40 cm long and 2–3 mm broad, linear, acuminate, villous

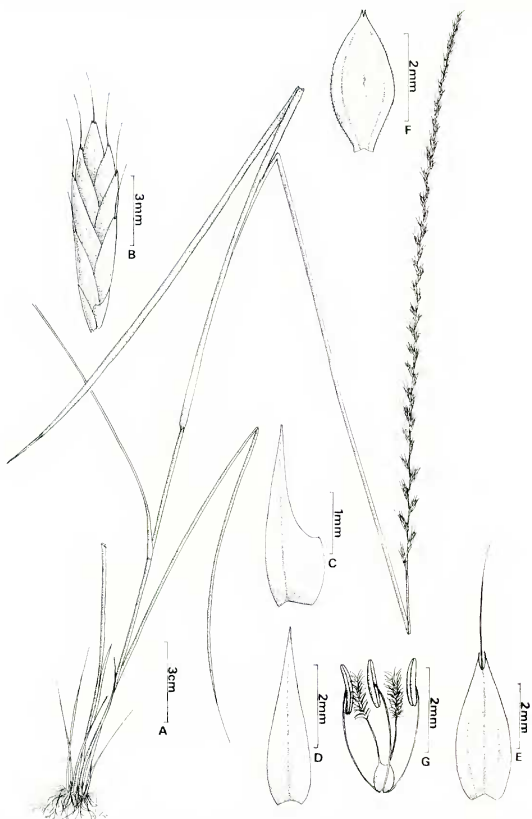


FIG. 1. *Tripogon sivarajanii* Sunil. A. Habit. B. Spikelet. C. Lower glume. D. Upper glume. E. Lemma. F. Palea. G. Stamens and Pistil. A-G, drawn from holotype.

on the upper surface with short dense hairs intermingled with long scattered shaggy hairs, glabrous below, the midrib inconspicuous; ligule a fine, glabrous membrane; sheath smooth. Racemes 20–45 cm long, with 25–60 spikelets; rachis smooth, glabrous. Spikelets 5–8-flowered, 7–8 mm long; callus hairy. Lower glume ca. 2 mm, lanceolate, shallowly notched on one side. Upper glume 3–4 mm long, lanceolate, acute or acuminate at the apex. Lemma 3–3.5 mm long, 3-nerved and 1-awned, glabrous, 2-lobed at the apex, the lobes acuminate, awned in the sinus; awns 3–3.5 mm, more or less equal to lemma, scabrid. Palea 2–3 mm, elliptic, 2-lobed at the apex, 2-keeled, winged, the wings narrow, the margins ciliate. Stamens 3; anthers ca. 1 mm, yellow tinged with pink. Ovary 0.25 mm, globose; styles 2; stigma feathery, purple. Grains unknown.

Distribution.—*Tripogon sivarajanii* is endemic to Kerala and is known only from the type locality, Valakettimala near Moolamattam in Idukki District of Kerala.

Ecology.—This species grows from 1000–1300 m elevation along grassy hill slopes and flowers from September to December.

Tripogon sivarajanii closely resembles, *T. trifidus* Munro ex Stapf, a species distributed in the eastern part of India in having 20–45 cm long racemes, 5–8-flowered spikelets, laterally lobed and notched lower glumes and the awns of the lemma being neither geniculate nor twisted. The two species can be separated as follows:

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| 1. Ligules ciliate, densely on the margins towards the apex; upper glume 2-toothed with a short awn at the apex; lemma bearded at base, 2-lobed at apex, awned in the sinus, the lobes awned at the apex; median awn twice as long as lemma; palea obtuse at the apex | <i>T. trifidus</i> |
| 1. Ligules glabrous throughout; upper glume never 2-toothed or awned at apex; lemma glabrous at base, 2-lobed at apex, awned in the sinus, the lobes never awned at the apex, median awn as long as or shorter than lemma; palea 2-lobed at the apex | <i>T. sivarajanii</i> |

The specific epithet honors the late V.V. Sivarajan, one of the foremost authorities on the flowering plants of Kerala. As a staff member of the University of Calicut, he had published over 25 new species, thus the dedication of this new Poaceae to him is appropriate and well-deserved.

***Tripogon vellarianus* Pradeep, sp. nov. (Fig. 2).** TYPE: INDIA. KERALA. Kozhikode Dt.: Vellarimala, 11°25.877'N, 76°06.765'E, 1300 m, 17 Oct 1997 (fl), A.K. Pradeep 56110 (HOLOTYPE: MH; ISOTYPES: BRIT, K, L, PBL).

Tripogon vellarianus sine cognato propinquo a congeneris aliis habitu valde caespitoso, foliis 8–15 mm latis, spiculis 10–17 mm longis, lemmate 2-lobato 3-aristato vel 1-aristato, aristis lateralibus minutis ad nullis distinguendus.

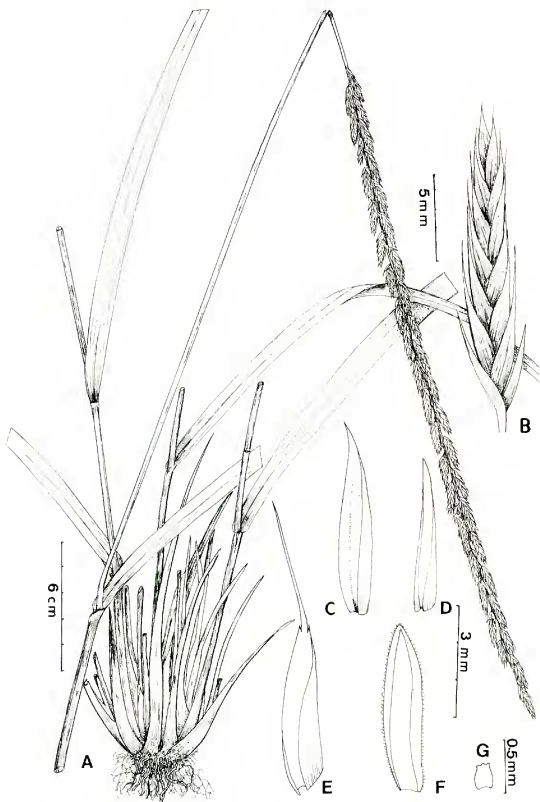


FIG. 2. *Tripogon tellarianus* Pradeep. A. Habit. B. Spikelet. C. Upper glume. D. Lower glume. E. Lemma. F. Palea. G. Lodicule. A-G, drawn from holotype.

Tufted perennial herb. Culms 30–90 cm tall, erect; nodes glabrous. Leaf blade 30–60 cm long, 8–15 mm wide, linear, base of blade glabrous. Sheaths closely clasping, rigid, glabrous; ligules indistinct. Racemes 30–40 cm long, rachis stout, glabrous. Spikelets 10–17 mm long, distant, dorsiventrally flattened, 8–10-flowered; callus bearded. Lower glumes 4 3 1.25 mm, lanceolate, acuminate at the apex, purplish tinged dorsally, glabrous. Upper glumes 5 3 1.5 mm, elliptic-lanceolate, acute at the apex, prominently 3-nerved, glabrous. Lemmas (excluding the awn) 5 3 2 mm, ovate-lanceolate, 3-nerved, median awn 3 mm long, lateral awns absent or up to 5 mm long often closely adpressed to the median awn, glabrous. Palea 4 3 2 mm, hyaline, narrowly elliptic, keeled and winged, keels minutely puberulous. Lodicules 2, ca 0.25 mm, quadrate, apex coarsely 3-toothed. Stamens 3; anthers 1.5 mm long, oblong; filaments 0.7 mm long, slender, glabrous. Ovary 0.25 mm, obovate; styles 2, slender, hyaline, 0.8 mm long; stigmas feathery, purplish, 0.6 mm long. Grains not seen.

Distribution.—*Tripogon vellarianus* is known only from Vellarimala on the Western Ghats of Kerala in India. This species is to be expected from adjacent hill ranges of Wayanad and Kannur districts.

Ecology.—This species occurs from 1000–1500 m in wet rocky grasslands adjoining evergreen forests. It flowers from October to January.

Tripogon vellarianus is a distinctive species characterised by its strongly tussock-forming habit, broad leaves and large spikelets. Thomas A. Cope (Kew, pers. comm.), after examining our material, commented “in majority of the lemmas the lateral awns are minute or absent altogether. I cannot recall another species in the genus that is so reluctant to produce lateral awns.” It does not compare with any of the species so far known under the genus, although its entire lemma sometimes recalls that of *Tripogon major* Hook. f., a species widespread in tropical Africa. Dr. P.V. Sreekumar, Port Blair (pers. comm.) wrote “I find it extremely difficult to accommodate even under *Tripogon*; and I believe lemma is continuous with the awns.” However, apart from the entire lemma, in every other respect it corresponds exactly with the genus *Tripogon*.

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